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Dr. Ana Mari Cauce
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University of Washington
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May 11, 2016

Dear Dr. Cauce:

We are writing to file a formal complaint about the **research practices of Professor Ray Hilborn, a tenured faculty member in the University of Washington's School of Aquatic Sciences.** As outlined in this letter, Dr. Hilborn has repeatedly failed to meet proper disclosure standards in his published research.

Dr. Hilborn has for many years taken large amounts of money from the fishing industry and other corporate interests. He has received both research funds (\$3.56 million) and numerous outside consultancies. Dr. Hilborn has not fully disclosed this financial connection with the fishing industry, including in publications where he has accused his opponents of being influenced by their funders.

We ask that UW conduct its own investigation into this matter and act to address the lack of disclosure of these funds in Dr. Hilborn's scientific and popular publications and the conflicts of interest this poses for him. We also ask that UW disclose the Facilities & Administrative overhead funds received indirectly as a result of Dr. Hilborn's industry funds.

As you may be aware, FOIA investigations have revealed that climate denialists (eg., Dr. Willie Soon) have failed to disclose connections to the fossil fuel industry. This issue is analogous and is no less important. We know, given the excellence of your university, that you understand the importance of disclosure to the credibility of scientific claims. The failure to fully disclose his corporate sources of funding is Dr. Hilborn's alone, but it is also facilitated by the lack of oversight by journals and universities. **The failure of Dr. Hilborn to fully disclose his ties to industry puts both scientific knowledge and the reputation of the University of Washington at risk.**

Documents obtained through a Public Records Act request to the University of Washington revealed that **between 2003 and January 2016, Dr. Hilborn received \$3.56 million from 69 distinct fishing or seafood industries and other corporate interests, including Trident, PeterPan Seafoods, the Bering Sea Fishermen's Association, Pacific Seafood Processors, the South African Deep Sea Trawling Association, and the International Seafood Sustainability Foundation (the trade association for the industrial tuna fleet) -- to name only a few.**

The documents obtained through the Public Records Act requests also show that **between 2003 and 2014, Dr. Hilborn received outside payments from numerous industry groups, including the National Fisheries Institute, the New Zealand Seafood Industry Council, the Sydney Fish Market, Deepwater Group LTD, the Canadian Sablefish Association, the BC Underwater Harvesters Association, FishAmerica Foundation, and ExxonMobil.** Many other groups from which Dr. Hilborn received funds are consultant firms and front groups that represent the fishing industry. The amount of income generated from this outside employment was not available from the Public Records Act requests.

On September 11, 2013, Dr. Hilborn testified before the Congressional Committee on Natural Resources about the Reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act. In his testimony (available online), Dr. Hilborn stated that the problem 20 years ago might have been overfishing, but that the issue today is *under*fishing. To quote the slide he presented: “The US has largely ‘solved’ overfishing and has layered so much precaution into our system that the major threat to producing benefits is underutilization.”

In his ‘Truth in Testimony’ form to Congress, Dr. Hilborn failed to disclose his funding from industry. He mentioned only his funding from federal grants and his affiliation with UW. When asked “Any employment, occupation, ownership in a firm or business, or work-related experiences that relate to your qualifications to testify on or knowledge of the subject matter of the hearing,” Dr. Hilborn responded only “Scientific advisor to several international fisheries commissions. 40 years’ experience in working with fisheries management agencies.” For the section, “Any other information you wish to convey that might aid the Members of the Committee to better understand the context of your testimony,” Dr. Hilborn listed “none. While Dr. Hilborn did acknowledge in his written testimony (but not his verbal presentation) that he receives “research funding from a wide range of foundations, NGOs, and commercial and recreational interest groups, the National Science Foundation and NOAA,” he made no mention of the many direct consultancy arrangements he has with the seafood industry.

In addition to this example of failing to properly disclose his industry funding to Congress, Dr. Hilborn rarely does so in his scientific publications. Of Dr. Hilborn’s 138 papers that contain acknowledgements, only 26 mention corporate funding. Dr. Hilborn only acknowledges 21 industry groups by name, although he has received research funding from at least 69 different industry groups between 2003 and January 2016, as well as fees from private consultancies from many more industry groups over the same time period.

Dr. Hilborn’s practices represent a significant departure from the accepted practices of his research community. The extensive examples we present here reveal repeated failures to disclose conflicts of interest and a degree of disclosure shortcomings that indicate Dr. Hilborn was either careless, or he was aware of his omissions and how full disclosure would have been perceived.

A few examples serve to illustrate **Dr. Hilborn’s repeated failure to disclose** and the severity of the ethical issues these failures raise:

LET US EAT FISH

On April 15, 2011, Dr. Hilborn published an Op-Ed in the *New York Times* titled “Let Us Eat Fish” in which he claimed consumers should not feel guilty for eating seafood and that the scientific data on overfishing “were exaggerated.” His byline for the Op-Ed read: “Ray Hilborn is a professor of aquatic and fishery sciences at the University of Washington.” Nothing is mentioned about the amounts of funding he has received from the seafood industry.

The *New York Times* recognizes the unethical nature of failures to disclose funding sources. For example, Brenda Shaffer wrote an Op-Ed for the *New York Times* on September 9, 2014, that called on President Obama to invite the president of Azerbaijan to Washington to discuss “Russia’s next land grab” over a byline that included only her affiliation with the University of Haifa and her being a visiting scholar at Georgetown University. She did not disclose that she had been a consultant to the state oil company of Azerbaijan. The *New York Times* added an editor’s note about that failed disclosure a week later.

On September 20, 2014, the *New York Times* Public Editor wrote a piece in which she said that the paper “should require prospective contributors to list the names of organizations where they have served as a paid consultant or staff member (within perhaps five years), and also whether any individual or organization with an interest in the topic has compensated them. That information should either be disclosed to the reader or be used to disqualify the writer altogether.”

We ask that Dr. Hilborn request an editor’s note to be added to his *New York Times* Op Ed disclosing his numerous financial links with the seafood industry.

MARINE STEWARDSHIP COUNCIL

Dr. Hilborn received outside income from TAVEL Certification Inc., a certification company approved by the Marine Stewardship Council (MSC) to conduct Sustainable Fishery Certifications and Chain of Custody Certifications, in both 2008-2009 and 2009-2010, to evaluate the status of British Columbia pink and chum fisheries for MSC certification. In addition, in 2004-2005 he received outside income from Scientific Certification Systems, which provides chain-of-custody certifications for MSC.

In 2010, Dr. Hilborn co-wrote correspondence in *Nature* titled “Marine stewardship: high bar for seafood” in which he argues in favor of the MSC. In addition, in 2012, Dr. Hilborn was co-author on a paper published in *PLOS One* titled “Eco-Label Conveys Reliable Information on Fish Stock Health to Seafood Consumers”, which concluded that the Marine Stewardship Council “accurately identifies healthy fish stocks and conveys reliable information on stock status to seafood consumers.” In the acknowledgements, the authors thank only “the Certification and Accreditation Bodies that provided confidential information on fisheries pre-assessments. The data reported in this paper are tabulated in the Supporting Information.”

However, *PLOS One* has clear rules about declaring competing interests, which include “paid employment or consultancy” -- which Dr. Hilborn received working for the Marine Stewardship Council through TAVEL.

PLOS One requires all potentially competing interests to be declared if they occurred within 5 years of conducting, or preparing for publication, the research under consideration. Interests outside the 5-year time frame must also be declared if they could reasonably be perceived as competing. *PLOS One* also notes: “Failure to

declare competing interests can result in immediate rejection of a manuscript. If an undisclosed competing interest comes to light after publication, *PLOS One* will take action in accordance with COPE guidelines and issue a public notification to the community.”

We ask that Dr. Hilborn declare his competing interests with *PLOS One* and note his funding from working on behalf of the Marine Stewardship Council (and/or the certification bodies they hire).

DAMS AND SALMON

Dr. Hilborn published an article titled “Ocean and dam influences on salmon survival” about Chinook salmon in the Columbia River in the April 23, 2013 issue of the *Proceedings of the National Academy of Science (PNAS)*. In this article, Dr. Hilborn makes the case that dams are not the cause of salmon decline.

According to PNAS, Dr. Hilborn declared no conflict of interest. According to the journal’s policy, “when a conflict of interest is disclosed either by the author or editor, a footnote describing the conflict will be included with the published article.”

However, Dr. Hilborn had consultancies (9/1/2012- 06/30/2013) for the San Luis Delta Mendota Water District, a powerful San Joaquin Valley farm water agency that represents corporate agribusiness interests (and their demand for more of California’s scarce water). San Luis Delta Mendota Water District “Evaluate[s] status of delta smelt and Chinook salmon in California as impacted by water withdrawals.” The major portion of the San Luis Unit includes the O’Neill Dam and Forebay, B.F. Sisk San Luis Dam, San Luis Reservoir, William R. Gianelli Pumping-Generating Plant, Dos Amigos Pumping Plant, and Los Banos and Little Panoche Reservoirs. In 2009-2010, Dr. Hilborn was also hired by Kronick Moskovitz Tiedmann & Girard, a California law firm focused on water and water-related resource law and which, according to its website, “represents Central Valley water agencies in ESA litigation challenging biological opinions issued by federal agencies governing various endangered and threatened species, including Chinook salmon, steelhead, and Delta smelt.”

The journal *PNAS* is strict about declaring conflicts of interest. Its Conflict of Interest Policy states: “The most important element of our policy is that all authors, members, referees, and editors must disclose any association that poses a financial or intellectual conflict of interest in connection with the manuscript... A conflict of interest includes a financial association or relationship that could influence the objectivity, integrity, or interpretation of a publication. Such conflicts of interest include relationships with corporations whose products or services are related to the subject matter of the article.”

We ask that Dr. Hilborn amend his declaration of “no conflict of interest” with the journal *PNAS* and note his funding from industrial water users with strong interests in dams.

MARINE PROTECTED AREAS (MPAs)

In 2012, Dr. Hilborn authored a paper titled “The role of science in MPA establishment in California: a personal perspective” in the journal *Environmental Conservation*, in which he questions the California process and states: “Future legislation must recognize the uncertainties associated with benefits of MPAs and specifically allow for adaptive management including explicit experimental tests of uncertainties.”

He does not acknowledge any funding for that work. However, Dr. Hilborn received outside employment from the California Fisheries Coalition, which includes 27 recreational and commercial fishing associations, in 2005-2006 to “evaluate and critique report on Marine Protected Areas in California” and more funding in 2008-2009 to “help teach a training course in how to evaluate alternative MPA siting proposals.”

In the June 4, 2013 issue of *PNAS*, Hilborn also questioned environmental benefit from large ocean MPAs. In addition to the outside employment from the California Fisheries Coalition, Dr. Hilborn also received outside employment from the FishAmerica Foundation, the conservation and research foundation of the American Sportfishing Association. He had outside contracts from them in 2007-2008, 2008-2009, and 2009-2010 to “evaluate alternative designs for marine protected areas.”

However, once again, Dr. Hilborn lists no acknowledgements and declares no conflicts of interest. As noted above, the journal *PNAS* is strict about declaring conflicts of interest.

We ask that Dr. Hilborn amend his declaration of “no conflict of interest” with the journal *PNAS* and note his funding from industry in both *PNAS* and *Environmental Conservation*.

GLOBAL OVERFISHING

In a 2007 article published in *Ecosystems* titled “Reinterpreting the state of fisheries and their management”, Dr. Hilborn rejected the idea of global overfishing and instead suggested that: “[i]n reality, current fisheries management is working well to achieve the legislated objective of MSY in some countries but is failing in others.” In the acknowledgements, Dr. Hilborn wrote: “My research has been supported by the National Science Foundation, the Gordon and Betty Moore Foundation and the University of Washington,” but he failed to mention any sources of corporate funding. In fact, during the period of 2005-2007 Dr. Hilborn received research money from many industry sources, including Trident, Peter Pan Seafoods, the New Zealand Seafood Industry Council, and the Bering Sea Fishermen’s Association.

We ask that Dr. Hilborn contact the journal *Ecosystems* and issue a correction to his acknowledgements mentioning the funding he received from seafood corporations.

In 2009, Dr. Hilborn was second author on “Rebuilding Global Fisheries” published in *Science*. The acknowledgements note the following: “This work was conducted as part of the ‘Finding common ground in marine conservation and management Working Group supported by the National Center for Ecological Analysis and Synthesis funded by NSF, the University of California, and the Santa Barbara campus. The authors acknowledge the Natural Sciences and Engineering Research Council (NSERC) and the Canadian Foundation for Innovation for funding database development, the Sea Around Us Project funded by Pew Charitable Trusts for compiling global catch data, and numerous colleagues and institutions around the world for sharing fisheries assessment, catch, access, and survey data, and ecosystem models (see SOM for full acknowledgments)”.

Here are the full acknowledgements from the SOM: “We are grateful to many colleagues and institutions for providing data to pursue this work. Ecosystem models (EwE and Atlantis) were contributed by Cameron Ainsworth, Alida Bundy, John Fields, Isaac Kaplan, Jason Link, Jodie Little, and Steve Mackinson. Stock

assessments were provided and entered by many, including the following: Anabela Brandão, John Bratney, Paul Breen, Elizabeth Brooks, Doug Butterworth, Laurel Col, Patrick Cordue, Nick Davies, Michelle de Decker, Karen Dwyer, Carryn de Moor, Jeff Fargo, Chris Francis, Dan Fu, Mark Gibson, David Gilroy, Analía Giussi, John Hampton, Stuart Hanchet, Peter Horn, Simon Hoyle, Gabriela Irusta, Chris Legault, Susan Johnston, Ralph Mayo, Andy McKenzie, Mike Melnychuk, Joanne Morgan, Loretta O'Brien, Éva Plagányi, Renee Prefontaine, Marta Renzi, Jake Schweigert, Alain Sinclair, Kate Stanton, Paul Starr, Ian Stewart, Mark Terceiro, Doug Vaughn, John Walter, Sue Wigley, together with Marine and Coastal Management, South Africa, and the CSIRO stock assessment group, Australia. We thank the following people for contributing survey data to this project and for assisting in interpreting the survey results: Diane Archambault, Hugues Benoît, Hugo Bourdages, Aaren Ellsworth, Robert Foy, Robert Lauth, Nicholas Sagalkin, Doug Swain, Dan Urban and Mark Wilkins; the surveys were conducted under the auspices of the following institutions: the International Council for the Exploration of the Sea, the Department of Fisheries and Oceans, Canada, the Alaska Department of Fish and Wildlife, the Alaska Fisheries Science Center, the Northeast Fisheries Science Center, the Northwest Fisheries Science Center, the National Marine Fisheries Service, U.S.A., and the Centre for Environment, Fisheries and Aquaculture Science, U.K. Our work was assisted greatly by the provision of data from FishBase: maximum length values for species were provided by Rainer Froese, and for higher level taxa by Grace Publico. Wade Blanchard of the Department of Mathematics and Statistics, Dalhousie University provided comments and suggestions on the survey trend analyses. Catch data and fisheries access agreement data were provided by the Pew-funded Sea Around Us Project. Thanks to Wilf Swartz who compiled the data plotted in Figure 5B. Julia Baum and Olaf Jensen acknowledge financial support by the David H. Smith Conservation Research Fellowship Program.”

Note that these extensive acknowledgments of authors' funding do not contain a single mention of Dr. Hilborn's industry ties. Note that Dr. Hilborn received a lot of industry funding from 2008-2009, including from Iccle Seafoods, Peter Pan Seafoods, Norquest Seafoods, Ocean Beauty Seafoods, etc.

Science requires manuscripts to be accompanied by clear disclosures from all authors any affiliations, funding sources, and financial or management relationships related to the reported research that might raise questions about possible sources of bias. We have requested from *Science* the disclosure forms for this paper.

We ask that Dr. Hilborn contact the journal *Science* and issue a correction to his acknowledgements and include his many corporate funding sources.

NEW ZEALAND ORANGE ROUGHY

In his 2006 paper published in the *Canadian Journal of Fisheries and Aquatic Sciences* titled, “The cost of overfishing and management strategies for new fisheries on slow-growing fish: orange roughy (*Hoplostethus atlanticus*) in New Zealand”, Hilborn and colleagues state: “the management of New Zealand orange roughy stocks has been close to economically optimal and has produced near maximum sustainable yield from the resource.”

No funding sources are listed in the acknowledgements to that paper. However, Dr. Hilborn received \$58,000 in research funding from the New Zealand Seafood Industry Council from 9/1/2005 to 8/31/2006 to work on orange roughy.

We ask that Dr. Hilborn contact the *Canadian Journal of Fisheries and Aquatic Sciences* and issue a correction to his acknowledgements and include the industry funding he received for his work on orange roughy.

Additional issues:

UW is also responsible for taking overhead from industry and allowing Dr. Hilborn to use the UW brand to support the seafood industry.

The CFOOD project, which launched in 2015, is an example of this. On June 8, 2015 Arctic Storm (“premier US fishing and surimi processing company”) gave Dr. Hilborn \$30,000 for a project called Cfood. Then Glacier Fish Company gave another \$30,000 for CFood on October 20, 2015, and then the International Coalition for Fisheries Association gave \$10,000 on Oct. 27, 2015. In January 2016, the National Fisheries Institute gave \$210,000 for Cfood.

According to the website, which is “cfooduw.org” (note the use of the UW branding): “The CFOOD project is made up of a network of scientists whose mission has evolved out of frustration with erroneous stories about fisheries sustainability that continue to appear in mainstream media. Much of this reporting has already been extensively refuted, yet it still lingers in the press. CFOOD identifies these reports and provides a forum for rapid-response by renowned experts, from marine biologists and ecologists to natural resource managers. CFOOD also provides analysis and commentary on the latest emerging fisheries science, as it happens. Whether it’s a critique, appraisal, or just commentary, CFOOD’s science-based approach to communicating the real story on fisheries sustainability seeks to set the record straight.”

Dr. Ray Hilborn is listed as the first member of the editorial board. The project has a twitter account that with the handle @cfoodUW and with 1,139 tweets (many of which are retweets from Dr. Hilborn’s Twitter account) and 1,107 followers. Nowhere on the website or Twitter page are the sources of funding listed. The CFOOD project as a whole and the way it co-opts the UW brand should be a serious concern.

As another point of concern, in 1996, Dr. Hilborn published a paper titled “Detecting population impacts from oil spills: a comparison of methodologies” in the *American Fisheries Society Symposium*. He wrote: “The purpose of this article is to review methodological approaches used to explore population level impacts resulting from the Exxon Valdez oil spill...” Consistent with the culture of doubt encouraged by the fossil fuel industry, he concluded: “To make a good case that oil caused changes in population abundance, no single source of evidence will be absolutely convincing.” Note that the Public Records Act documents we received do not pre-date 2003, but Dr. Ray Hilborn received outside employment from ExxonMobil in 2005-2006. We encourage U.W. to review Dr. Hilborn’s funding during the mid-90s to assess whether there may have been additional failures to disclose conflicts of interest.

In early 2012, Dr. Hilborn and colleagues published the article, “Defining Trade-Offs among Conservation, Profitability, and Food Security in the California Current Bottom-Trawl Fishery” in *Conservation Biology*. They conclude: “There are clear conservation benefits to lower harvest rates, but avoiding overfishing of all stocks in a multispecies fishery carries a substantial cost in terms of lost yield and profit.”

This is very much in line with Dr. Hilborn's extensive, but unacknowledged industry funding from California fisheries and seafood companies. Notably, after this article was published, Dr. Hilborn received more than \$44,000 in grants in the next few years for research projects related to "impacts of trawling" from American Seafoods Group, Gorton's Sealord Group Limited, Glacier Fish Company, San Arawa S.A., Pesca Chile, Blumar SA, and Independent Fisheries.

We are also concerned that the latent conflicts of interest that beset Dr. Hilborn may also have compromised his objectivity as a reviewer and handling editor of scientific journals. There are several such cases and here we provide just three instances. Since 2010, Dr. Hilborn has been a guest editor for *PNAS*. He was also a member of the Board of Reviewing Editors for *Science* from 2006 to 2013. In addition, he was Associate Editor for the *Canadian Journal of Fisheries and Aquatic Sciences* from 2002-2013. These journals often receive manuscripts touching on the ecosystem impacts of industrial fishing, research areas where conflicts of interest can influence the assessment of a contribution. We are filing letters with each of the journals for which we have evidence of Dr. Hilborn's failure to disclose a potential conflict of interest.

We very much appreciate your attention to this matter and your understanding of its importance to the function and integrity of academic research.

Respectfully,

A handwritten signature in black ink, appearing to read "John Hocevar". The signature is fluid and cursive, with the first name "John" being more prominent than the last name "Hocevar".

John Hocevar
Oceans Campaign Director
Greenpeace USA